

REMARKS

Claims 1-7 are all the claims pending in the application.

Upon entry of the amendment, which is respectfully requested, claim 1 will be amended.

Claim 1 is amended in response to a rejection under 35 U.S.C. 112, first paragraph, as discussed below. The amendment to claim 1 reduces issue for appeal, and thus, entry of the amendment is respectfully requested.

I. Rejection under 35 U.S.C. § 112

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that, while there is support for the claims limitation “homopolymer of polyethylene glycol” or “homopolymer of polypropylene glycol” of claim 1, there is no support to recite “homopolymer of polyalkylene glycol”.

Without acquiescing in the merits of the rejection, in an effort to advance the prosecution, claim 1 has been amended to limit the homopolymer of polyalkylene glycol to a homopolymer of polyethylene glycol and a homopolymer of polypropylene glycol. Support for the amendment to claim 1 can be found in the specification, for example, on page 28, first full paragraph.

Withdrawal of the foregoing rejection of claims 1-7 under 35 U.S.C. §112, first paragraph, is respectfully requested.

II. Rejection under 35 U.S.C. § 103

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over on Lucast et al. (WO00/78884; or its equivalent US 6,518,343B1; “Lucast”) in view of Cooprider et al. (US 5,571,617; “Cooprider”), Imamura et al (US 5,783,209; “Imamura”), and further as evidenced by Istvan Benedek and Luck J. Heymans (Pressure-Sensitive Adhesive Technology, Marcel Dekker Inc., Chapter 8, page 412, 1997).

On page 11 of the Office Action, the Examiner states that he is no longer relying on Lucast to teach or suggest the limitation of a homopolymer of polyalkylene glycol (i.e. one of the hydrophilic polymers C of claimed invention). Instead, the Examiner now relies on newly cited Imamura et al as assertedly rendering obvious this aspect of the claims.

Applicants respectfully traverse.

The Examiner asserts that Imamura discloses a medical pressure-sensitive adhesive. The Examiner further asserts that Imamura discloses the addition of hydrophilic polymer particles due to Imamura's disclosure of polyvinyl alcohol ("PVOH") and polyvinyl pyrrolidone. *See* Office Action, at page 6, last paragraph.

Applicants disagree. Imamura does not disclose or teach the instantly claimed hydrophilic polymer (C) or the claimed range for hydrophilic polymer (C), as recited in claim 1.

The above rejection should be withdrawn because there is insufficient motivation to combine Imamura with the other cited references, in the manner suggested by the Examiner.

Imamura relates to solution polymerization. Imamura describes that the amount of polyol as a plasticizer is preferably 0.1 to 10 wt%. However, there is no description in the specification or Examples of Imamura about what this amount of polyol (0.1 to 10 wt%) is based upon. Similarly, although Imamura describes that the amount of hydrophilic polymer particles is preferably 0.1 to 30 wt%, there is no description in the specification or Examples of Imamura about what this amount of hydrophilic polymer particles (0.1 to 30 wt%) is based upon.

It is noted that, in Imamura's examples, the amount of compound the including each of vinylpyrrolidone (NVP) and ethylene glycol (AM90G and EOA) is listed as being in an amount that is per 300 parts of ethyl acetate as solvent, 0.3 parts azobisisobutylnitrile, and the amount of the remaining monomers cited therein. See Col. 8, lines 27-33.

However, for the reasons as explained below, N-vinyl-2 pyrrolidone (NVP) and methoxypoly(ethylene glycol) acrylate (AM90G, EOA) of Imamura are not hydrophilic polymers, as required by the present claims.

Although NVP is a hydrophilic monomer, since it is copolymerized with other monomers, hydrophilic polymer is no longer generated.

In addition, methoxypoly(ethylene glycol) acrylate (AM90G, EOA) is originally not a hydrophilic monomer, and therefore the obtained polymer does not dissolve in water.

Therefore, N-vinyl-2 pyrrolidone (NVP) and methoxypoly(ethylene glycol) acrylate (AM90G, EOA) of Imamura are different from the present invention in which hydrophilic polymer is added to the pressure-sensitive adhesive composition which is the main component. Claim 1 recites that the hydrophilic polymer is added as an aqueous solution after the polymerization of the acrylic polymer.

In addition, the Examples of Imamura relate to a solution polymerization in which polymerization is carried out in ethyl acetate as a polymerization solvent, which is completely different from the emulsion polymerization conducted in accordance with the present invention. Namely, the existence forms of the polymers are completely different. Although polymer dissolves in ethyl acetate, polymer is present in the form of a particle in the water in emulsion polymerization. Further, although emulsifier is not used in the solution polymerization, emulsifier is used in the emulsion polymerization and is adsorbed on the surface of the polymer particle. Therefore, after the drying of solvent and water, the constitution of the tape obtained by solution polymerization is quite different from that of the tape obtained by emulsion polymerization.

Further, claim 1 recites that (B) an anionic emulsifier containing a sulfur atom is contained in a proportion of from 0.1 to 3 parts by weight based on 100 parts by weight of the whole of the monomer components constituting the acrylic polymer (A) that forms the surface portion of the pressure-sensitive adhesive layer.

The amount of the anionic emulsifier containing a sulfur atom in a surface portion of the pressure-sensitive adhesive layer, which is one of the main features of the present invention, is not taught by any of the cited references. In addition, for the reasons of record, (for example, the Response filed September 15, 2008), the cited references do not satisfy the claimed amount of emulsifier in the surface portion, which is also one of the main features of the present invention.

Imamura does not describe an emulsifier. Imamura describes solution polymerization and emulsion polymerization in parallel, and does not at all mention the differences in terms of structure caused by the difference between solution polymerization and emulsion polymerization (i.e., polymer uniformly dissolves in the case of solution polymerization, while polymer is present in the form of particle in the case of emulsion polymerization). Although Imamura describes that the hydrophilic polymer is added, hydrophilic polymer does not dissolve in the case of emulsion polymerization (i.e., under the condition that oil and water are mixed). In addition, although Imamura describes adding a hydrophilic polymer, since there is no description or Example of Imamura concerning emulsion polymerization, the structure is not at all clear.

On the other hand, as described in present claim 1, two of the main features of the presently claimed subject matter are: (1) the amount of anionic emulsifier, and (2) the amount of hydrophilic polymer in the surface portion of the pressure-sensitive adhesive layer formed of an aqueous dispersion pressure-sensitive adhesive composition. As explained above, when the type

of the pressure-sensitive adhesive composition is not an aqueous dispersion type, the constitution of the pressure-sensitive adhesive composition becomes completely different. In addition, no cited reference describes the claimed amount of the anionic emulsifier containing a sulfur atom in a surface portion of the pressure-sensitive adhesive layer. Excellent pressure-sensitive adhesiveness on wet surface is not obtained only by the presence of hydrophilic polymer, but the amount of the emulsifier in the surface portion is also important.

In addition, Imamura describes adding hydrophilic polymer as a particle (col. 6, lines 20-21). In this regard, when hydrophilic polymer is added in aqueous system, it does not become particles. Hydrophilic polymer becomes particles only when the surround (solvent) is lipophilic and the hydrophilic polymer is dispersed to be stable owing to emulsifier or dispersant. Therefore, Imamura intends to add a hydrophilic polymer in a solvent system. On the other hand, since the hydrophilic polymer is added as an aqueous solution in the aqueous dispersion pressure-sensitive adhesive composition according to the present invention, the hydrophilic polymer is not in the form of particles.

On the contrary, an acrylic polymer as the main component is dissolved in a solvent in the case of a solvent system, while it is present in the form of particles in the case of an aqueous system. A solvent system and an aqueous system are quite different also in terms of this point. Since Imamura is directed to a solvent system, it does not teach or suggest controlling the amount of emulsifier in the surface portion as defined in the present invention.

For at least the above reasons, Applicants respectfully submit that there is insufficient motivation to combine Imamura with the other cited references, in the manner suggested by the Examiner. Further, one of the ordinary skill would not have arrived at the present invention, even by combining the teachings of Imamura with the other cited references.

Accordingly, the present claims are not obvious over Lucast, either alone or in view of Cooprider and Imamura and the other cited references. Reconsideration and withdrawal of the foregoing §103(a) rejection of the present claims are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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